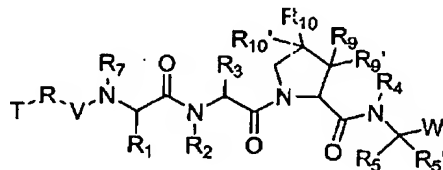


Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims

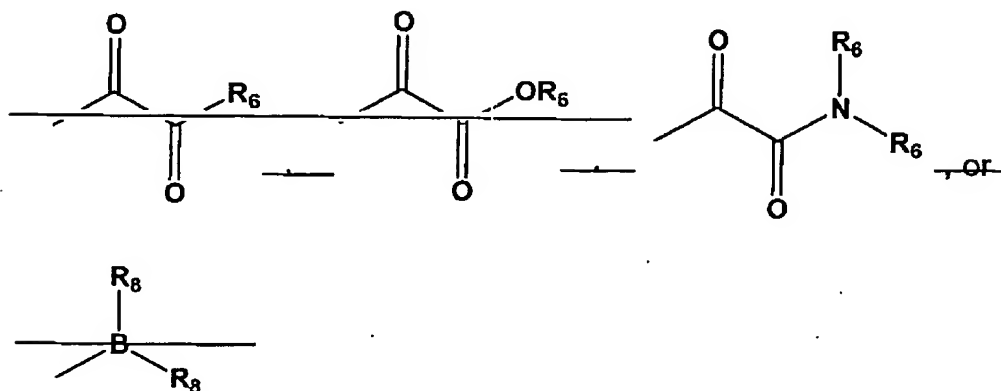
1. (currently amended) A compound of formula I:



I

or a pharmaceutically acceptable salt, or mixtures thereof, wherein:

W is:



wherein each  $R_6$  is independently:

- hydrogen-,
- (C1-C12)-aliphatic-,
- (C6-C10)-aryl-,
- (C6-C10)-aryl-(C1-C12)aliphatic-,
- (C3-C10)-cycloalkyl- or cycloalkenyl-,
- [(C3-C10)-cycloalkyl- or cycloalkenyl]-(C1-C12)-aliphatic-,
- (C3-C10)-heterocyclyl-,
- (C3-C10)-heterocyclyl-(C1-C12)-aliphatic-,

(C5-C10)-heteroaryl-, or

(C5-C10)-heteroaryl-(C1-C12)-aliphatic-, or

wherein up to 3 aliphatic carbon atoms in each  $R_6$  may be optionally replaced with S, -S(O)-, -S(O)<sub>2</sub>-, -O-, -N-, or -N(H)- in a chemically stable arrangement;

wherein  $R_6$  may be optionally substituted with up to 3 J substituents; or

two  $R_6$  groups, together with the nitrogen atom to which they are bound, may optionally form a 5- to 6-membered aromatic or a 3- to 7-membered saturated or partially unsaturated ring system wherein up to 3 ring atoms may be optionally replaced with N, NH, O, S, SO, and SO<sub>2</sub>, wherein said ring system may be optionally fused to a (C6-C10)aryl, (C5-C10)heteroaryl, (C3-C10)cycloalkyl, or a (C3-C10)heterocyclyl, wherein any ring has up to 3 substituents selected independently from J;

wherein each  $R_8$  is independently -OR'; or the  $R_8$  groups together with the boron atom, may optionally form a (C3-C10)-membered heterocyclic ring wherein each  $R_8$  is independently -OR'; or the  $R_8$  groups together with the boron atom, may optionally form a (C3-C10)-membered heterocyclic ring having, in addition to the boron, up to 3 ring atoms optionally replaced with N, NH, O, S, SO, and SO<sub>2</sub>;

J is halogen, -OR', -NO<sub>2</sub>, -CN, -CF<sub>3</sub>, -OCF<sub>3</sub>, -R', oxo, thioxo, =N(R'), =N(OR'), 1,2-methylenedioxy, 1,2-ethylenedioxy, -N(R')<sub>2</sub>, -SR', -SOR', -SO<sub>2</sub>R', -SO<sub>2</sub>N(R')<sub>2</sub>, -SO<sub>3</sub>R', -C(O)R', -C(O)C(O)R', -C(O)C(O)OR', -C(O)C(O)NR', -C(O)CH<sub>2</sub>C(O)R', -C(S)R', -C(S)OR', -C(O)OR', -OC(O)R', -C(O)N(R')<sub>2</sub>, -OC(O)N(R')<sub>2</sub>, -C(S)N(R')<sub>2</sub>, -(CH<sub>2</sub>)<sub>0-2</sub>NHC(O)R', -N(R')N(R')COR', -N(R')N(R')C(O)OR', -N(R')N(R')CON(R')<sub>2</sub>, -N(R')SO<sub>2</sub>R', -N(R')SO<sub>2</sub>N(R')<sub>2</sub>, -N(R')C(O)OR', -N(R')C(O)R', -N(R')C(S)R', -N(R')C(O)N(R')<sub>2</sub>, -N(R')C(S)N(R')<sub>2</sub>,

-N(COR')COR', -N(OR')R', -C(=NH)N(R')<sub>2</sub>, -C(O)N(OR')R',  
 -C(=NOR')R', -OP(O)(OR')<sub>2</sub>, -P(O)(R')<sub>2</sub>, -P(O)(OR')<sub>2</sub>, or  
 -P(O)(H)(OR'); wherein;

R' is independently selected from:

hydrogen-,  
 (C1-C12)-aliphatic-,  
 (C3-C10)-cycloalkyl- or -cycloalkenyl-,  
 [(C3-C10)-cycloalkyl or -cycloalkenyl]-(C1-C12)-  
 aliphatic-,  
 (C6-C10)-aryl-,  
 (C6-C10)-aryl-(C1-C12)aliphatic-,  
 (C3-C10)-heterocyclyl-,  
 (C3-C10)-heterocyclyl-(C1-C12)aliphatic-,  
 (C5-C10)-heteroaryl-, and  
 (C5-C10)-heteroaryl-(C1-C12)-aliphatic-;

wherein up to 5 atoms in R' may be optionally and  
 independently substituted with J;

wherein two R' groups bound to the same atom may  
 optionally form a 5- to 6-membered aromatic or a 3- to  
 7-membered saturated or partially unsaturated ring  
 system wherein up to 3 ring atoms may be optionally  
 replaced with a heteroatom independently selected from  
 N, NH, O, S, SO, and SO<sub>2</sub>, wherein said ring system may  
 be optionally fused to a (C6-C10)aryl,  
 (C5-C10)heteroaryl, (C3-C10)cycloalkyl, or a  
 (C3-C10)heterocyclyl, wherein any ring has up to 3  
 substituents selected independently from J;

R<sub>5</sub> and R<sub>5</sub> are each independently hydrogen or (C1-C12)-  
 aliphatic, wherein any hydrogen may be optionally  
 replaced with halogen; wherein any terminal carbon atom  
 of R<sub>5</sub> may be optionally substituted with sulfhydryl or  
 hydroxy; or R<sub>5</sub> is Ph or -CH<sub>2</sub>Ph and R<sub>5</sub> is H, wherein said  
 Ph or -CH<sub>2</sub>Ph group may be optionally substituted with up  
 to 3 substituents independently selected from J; or

R<sub>5</sub> and R<sub>5</sub>, together with the atom to which they are bound may optionally form a 3- to 6-membered saturated or partially unsaturated ring system wherein up to 2 ring atoms may be optionally replaced with N, NH, O, SO, or SO<sub>2</sub>; wherein said ring system has up to 2 substituents selected independently from J;

R<sub>2</sub>, R<sub>4</sub>, and R<sub>7</sub> are each independently:

hydrogen-,

(C1-C12)-aliphatic-,

(C3-C10)-cycloalkyl-(C1-C12)-aliphatic-, or

(C6-C10)-aryl-(C1-C12)-aliphatic-;

wherein up to two aliphatic carbon atoms in each of R<sub>2</sub>, R<sub>4</sub>, and R<sub>7</sub> may be optionally replaced with S, -S(O)-, -S(O)<sub>2</sub>-, -O-, -N-, or -N(H)- in a chemically stable arrangement;

wherein each of R<sub>2</sub>, R<sub>4</sub>, and R<sub>7</sub> may be independently and optionally substituted with up to 3 substituents independently selected from J;

R<sub>1</sub> and R<sub>3</sub> are each independently:

(C1-C12)-aliphatic-,

(C3-C10)-cycloalkyl- or -cycloalkenyl-,

[(C3-C10)-cycloalkyl- or -cycloalkenyl]-(C1-C12)-aliphatic-,

(C6-C10)-aryl-(C1-C12)aliphatic-, or

(C5-C10)-heteroaryl-(C1-C12)-aliphatic-;

wherein up to 3 aliphatic carbon atoms in each of R<sub>1</sub> and R<sub>3</sub> may be optionally replaced with S, -S(O)-, -S(O)<sub>2</sub>-, -O-, -N-, or -N(H)- in a chemically stable arrangement;

wherein each of R<sub>1</sub> and R<sub>3</sub> may be independently and optionally substituted with up to 3 substituents independently selected from J;

R<sub>9</sub>, R<sub>10</sub>, and R<sub>10</sub> are each H;

~~R<sub>9</sub>, R<sub>9</sub>, R<sub>10</sub>, and R<sub>10</sub> are each independently is -X-Y-Z;~~

~~X is a bond, C(H)(R<sub>6</sub>), O, S, or N(R<sub>11</sub>);~~

R<sub>11</sub> is:

hydrogen-,  
 (C1-C12)-aliphatic-,  
 (C6-C10)-aryl-,  
 (C6-C10)-aryl-(C1-C12)aliphatic-,  
 (C3-C10)-cycloalkyl- or cycloalkenyl-,  
 [(C3-C10)-cycloalkyl- or cycloalkenyl]-(C1-C12)-  
 aliphatic-,  
 (C3-C10)-heterocyclyl-,  
 (C3-C10)-heterocyclyl-(C1-C12)-aliphatic-,  
 (C5-C10)-heteroaryl-, or  
 (C5-C10)-heteroaryl-(C1-C12)-aliphatic-,

wherein up to 3 aliphatic carbon atoms in each R<sub>11</sub>  
 may be optionally replaced with S, -S(O)-, -S(O)<sub>2</sub>-,  
 -O-, -N-, or -N(H)- in a chemically stable arrangement;

wherein R<sub>11</sub> may be optionally substituted with up to  
 3 J substituents; or

wherein R<sub>11</sub> and Z together with the atoms to which  
 they are bound, optionally form a nitrogen containing  
 5-7-membered mono- or 6-11-membered bicyclic ring  
 system optionally substituted with up to 3 J  
 substituents, wherein up to 3 ring atoms in said ring  
 system may be optionally replaced with O, NH, S, SO, or  
 SO<sub>2</sub> in a chemically stable arrangement;

Y is a bond, ~~CH<sub>2</sub>, C(O), C(O)C(O), S(O), S(O)<sub>2</sub>, or~~  
~~S(O)(NR<sub>12</sub>)~~;

R<sub>12</sub> is:

hydrogen-,  
 (C1-C12)-aliphatic-,  
 (C6-C10)-aryl-,  
 (C6-C10)-aryl-(C1-C12)aliphatic-,  
 (C3-C10)-cycloalkyl- or cycloalkenyl-,  
 [(C3-C10)-cycloalkyl- or cycloalkenyl]-(C1-C12)-  
 aliphatic-,

(C3-C10)-heterocyclyl-,  
 (C3-C10)-heterocyclyl-(C1-C12)-aliphatic-,  
 (C5-C10)-heteroaryl-, or  
 (C5-C10)-heteroaryl-(C1-C12)-aliphatic-,

wherein up to 3 aliphatic carbon atoms in each R<sub>12</sub> may be optionally replaced with S, -S(O)-, -S(O)<sub>2</sub>-, -O-, -N-, or -N(H)-, in a chemically stable arrangement;

wherein R<sub>12</sub> may be optionally substituted with up to 3 J substituents;

Z is:

~~hydrogen-,~~  
 (C1-C12)-aliphatic-,  
 (C3-C10)-cycloalkyl- or -cycloalkenyl-,  
 [(C3-C10)-cycloalkyl or -cycloalkenyl]-(C1-C12)-  
 aliphatic-,  
~~(C6-C10)-aryl-,~~  
~~(C6-C10)-aryl-(C1-C12)-aliphatic-,~~  
~~(C3-C10)-heterocyclyl-,~~  
~~(C3-C10)-heterocyclyl-(C1-C12)-aliphatic-,~~  
~~(C5-C10)-heteroaryl-, or~~  
~~(C5-C10)-heteroaryl-(C1-C12)-aliphatic-;~~

wherein up to three aliphatic carbon atoms in Z may be optionally replaced with S, -S(O)-, -S(O)<sub>2</sub>-, -O-, -N-, or -N(H)-, in a chemically stable arrangement;

wherein any ring may be optionally fused to a (C6-C10)aryl, (C5-C10)heteroaryl, (C3-C10)cycloalkyl, or (C3-C10)heterocyclyl;

wherein Z may be independently and optionally substituted with up to 3 substituents independently selected from J;

V is -C(O)-, ~~-S(O)-, or -S(O)<sub>2</sub>-;~~

R is ~~-C(O)-, -S(O)-, -S(O)<sub>2</sub>-, -N(R<sub>12</sub>)-, -O-, or a bond;~~

T is imidazolyl+

~~(C1-C12) aliphatic,~~  
~~(C6-C10) aryl,~~  
~~(C6-C10) aryl (C1-C12) aliphatic,~~  
~~(C3-C10) cycloalkyl or cycloalkenyl,~~  
~~{(C3-C10) cycloalkyl or cycloalkenyl} (C1-C12) aliphatic,~~  
~~(C3-C10) heterocyclyl,~~  
~~(C3-C10) heterocyclyl (C1-C12) aliphatic,~~  
~~(C5-C10) heteroaryl, or~~  
~~(C5-C10) heteroaryl (C1-C12) aliphatic,~~  
~~— wherein up to 3 aliphatic carbon atoms in T may be replaced with S, S(O), S(O)<sub>2</sub>, O, N, or N(H), in a chemically stable arrangement,~~  
 wherein each T may be optionally substituted with up to 3 J substituents; or

~~T is selected from N(R<sub>6</sub>)(R<sub>6c</sub>), and~~

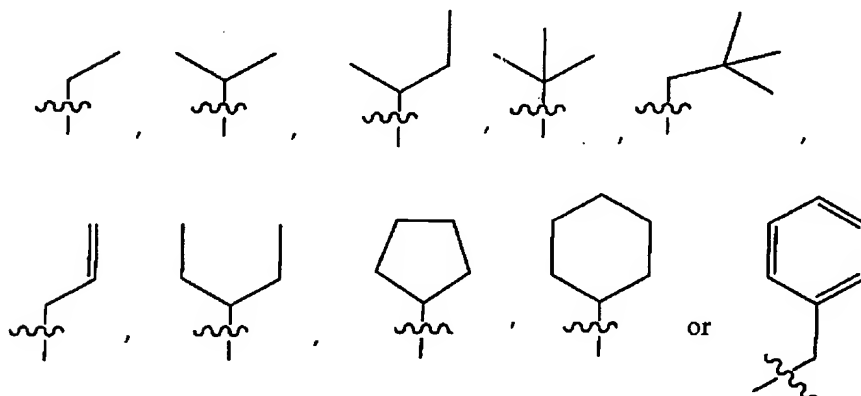
~~R<sub>6c</sub> is~~

~~hydrogen,~~  
~~(C1-C12) aliphatic,~~  
~~(C6-C10) aryl,~~  
~~(C6-C10) aryl (C1-C12) aliphatic,~~  
~~(C3-C10) cycloalkyl or cycloalkenyl,~~  
~~{(C3-C10) cycloalkyl or cycloalkenyl} (C1-C12) aliphatic,~~  
~~(C3-C10) heterocyclyl,~~  
~~(C3-C10) heterocyclyl (C1-C12) aliphatic,~~  
~~(C5-C10) heteroaryl, or~~  
~~(C5-C10) heteroaryl (C1-C12) aliphatic, or~~  
~~wherein up to 3 aliphatic carbon atoms in each R<sub>6c</sub> may be optionally replaced with S, S(O), S(O)<sub>2</sub>, O, N, or N(H) in a chemically stable arrangement,~~  
~~wherein R<sub>6c</sub> may be optionally substituted with up to 3 J substituents, or~~

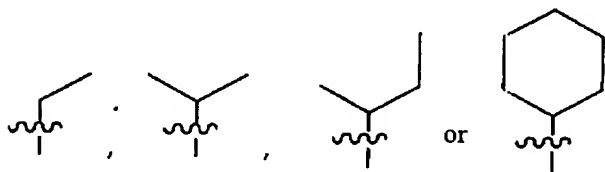
~~R<sub>6</sub> and R<sub>6,7</sub>, together with the nitrogen atom to which they are bound, may optionally form a (C3-C10) heterocyclic ring system wherein said ring system may be optionally substituted with up to 3 substituents independently selected from J.~~

2-4 (cancelled)

5. (currently amended) The compound according to claim 4\_1, wherein R<sub>9</sub> is



6. (original) The compound according to claim 5, wherein R<sub>9</sub> is

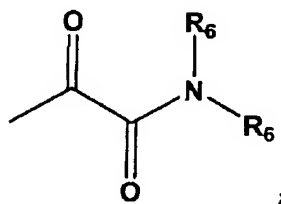


7. (original) The compound according to claim 6, wherein R<sub>9</sub> is ethyl.

8-14 (cancelled)

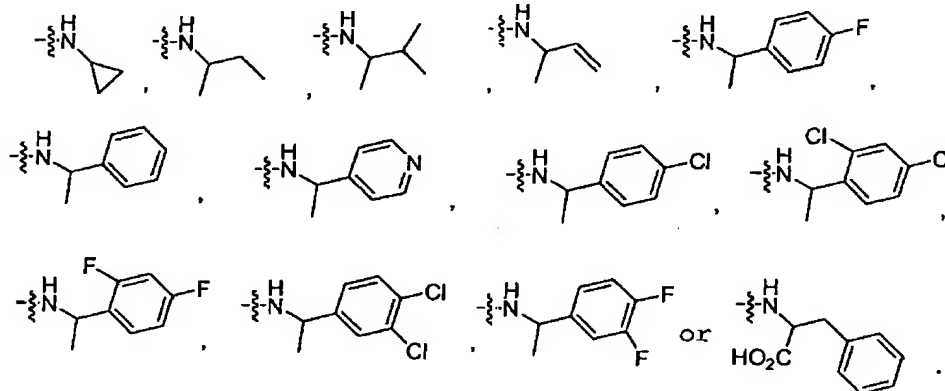


15. (original) The compound according to any one of claims 1-14, wherein W is:

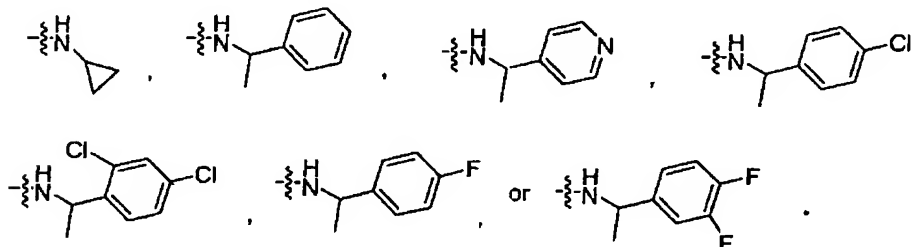


wherein in the W, the  $\text{NR}_6\text{R}_6$  is selected from  $\text{-NH-}$ (C1-C6 aliphatic),  $\text{-NH-}$ (C3-C6 cycloalkyl),  $\text{-NH-CH(CH}_3\text{)-aryl}$ , or  $\text{-NH-CH(CH}_3\text{)-heteroaryl}$ , wherein said aryl or said heteroaryl is optionally substituted with up to 3 halogens.

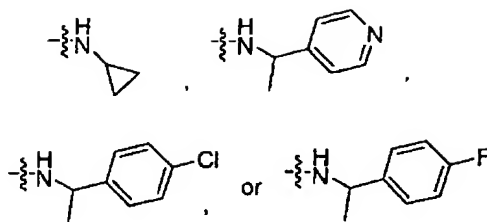
16. (original) The compound according to claim 15, wherein in the W, the  $\text{NR}_6\text{R}_6$  is:



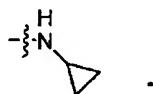
17. (original) The compound according to claim 16, wherein in the W, the  $\text{NR}_6\text{R}_6$  is:



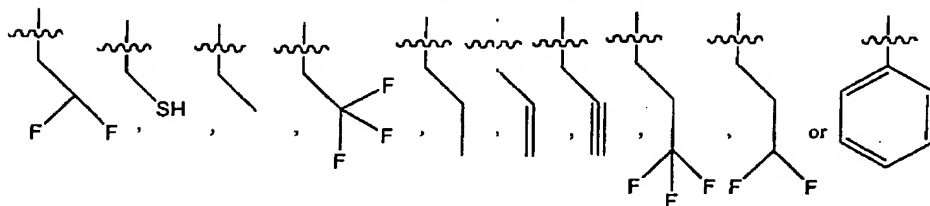
18. (original) The compound according to claim 17, wherein in the W, the  $\text{NR}_6\text{R}_6$  is:



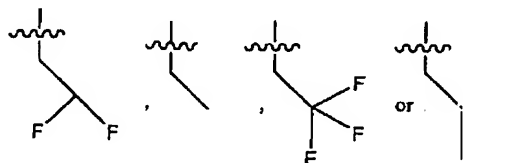
19. (original) The compound according to claim 18, wherein in the W, the  $\text{NR}_6\text{R}_6$  is:



20. (previously presented) The compound according to claim 1, wherein  $\text{R}_5$  is hydrogen and  $\text{R}_6$  is:



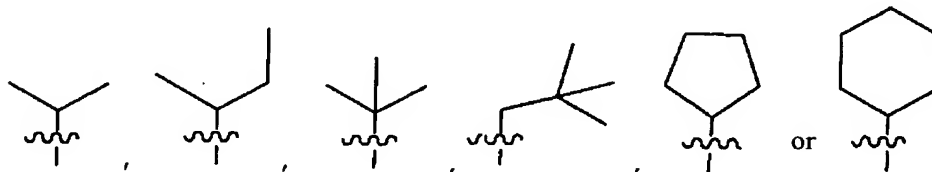
21. (original) The compound according to claim 20, wherein  $\text{R}_5$  is hydrogen and  $\text{R}_6$  is:



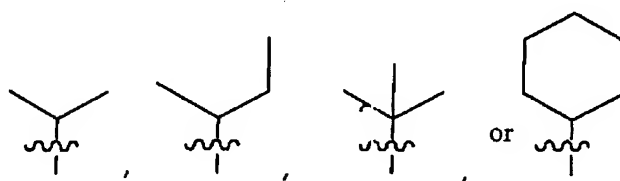
22. (previously presented) The compound according to claim 1, wherein  $\text{R}_2$ ,  $\text{R}_4$ , and  $\text{R}_7$  are each independently H, methyl, ethyl, or propyl.

23. (original) The compound according to claim 22, wherein  $\text{R}_2$ ,  $\text{R}_4$ , and  $\text{R}_7$  are each hydrogen.

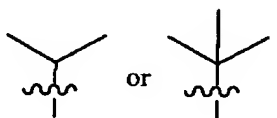
24. (previously presented) The compound according to claim 1, wherein  $R_3$  is:



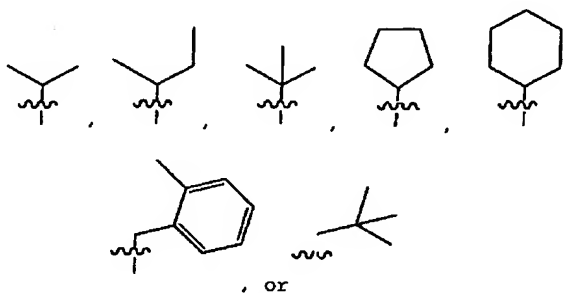
25. (original) The compound according to claim 24, wherein  $R_3$  is:



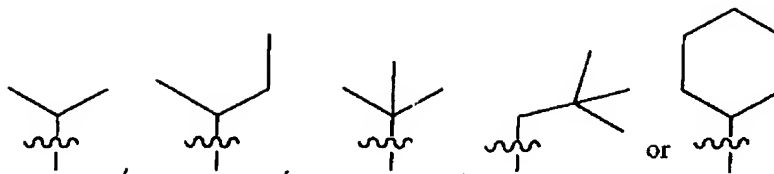
26. (original) The compound according to claim 25, wherein  $R_3$  is:



27. (previously presented) The compound according to claim 1, wherein  $R_1$  is:



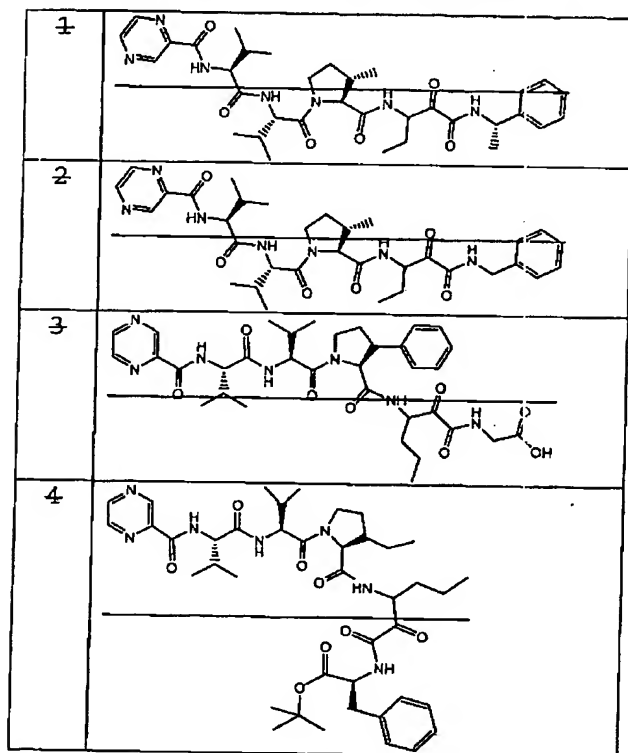
28. (original) The compound according to claim 27, wherein  $R_1$  is:

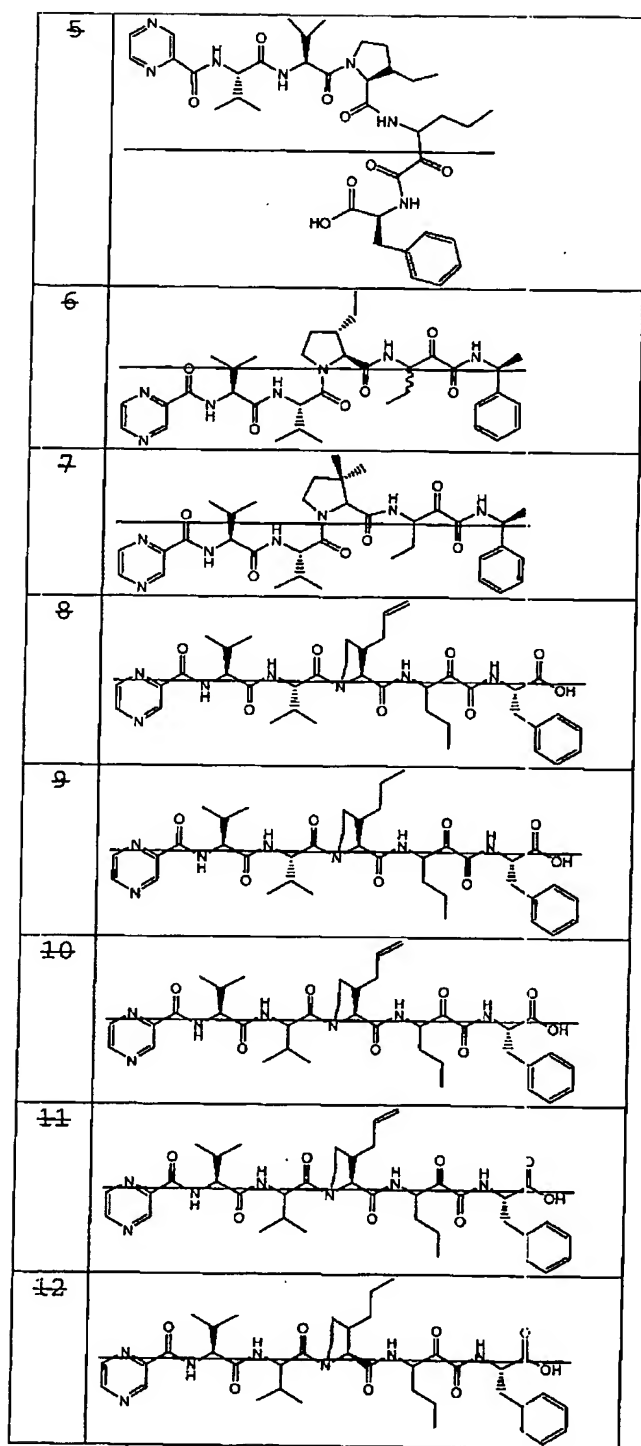


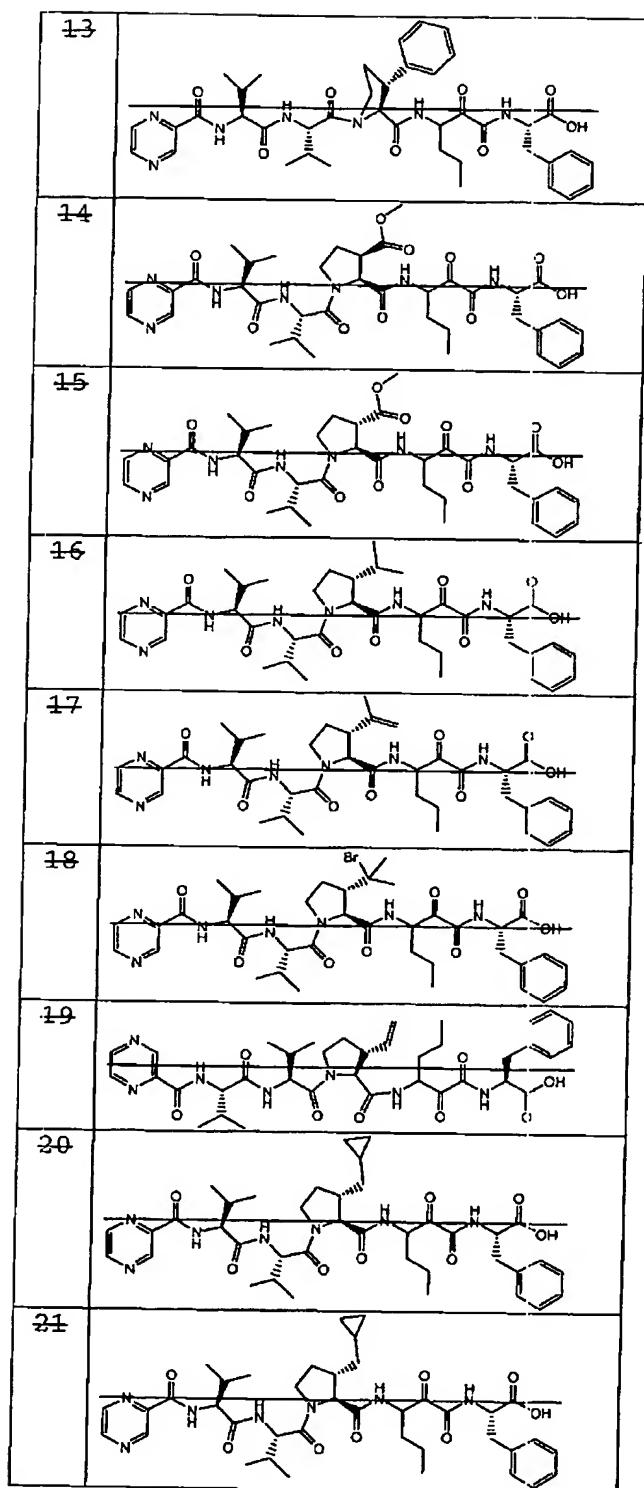
29. (original) The compound according to claim 18, wherein R<sub>1</sub> is isopropyl or cyclohexyl.

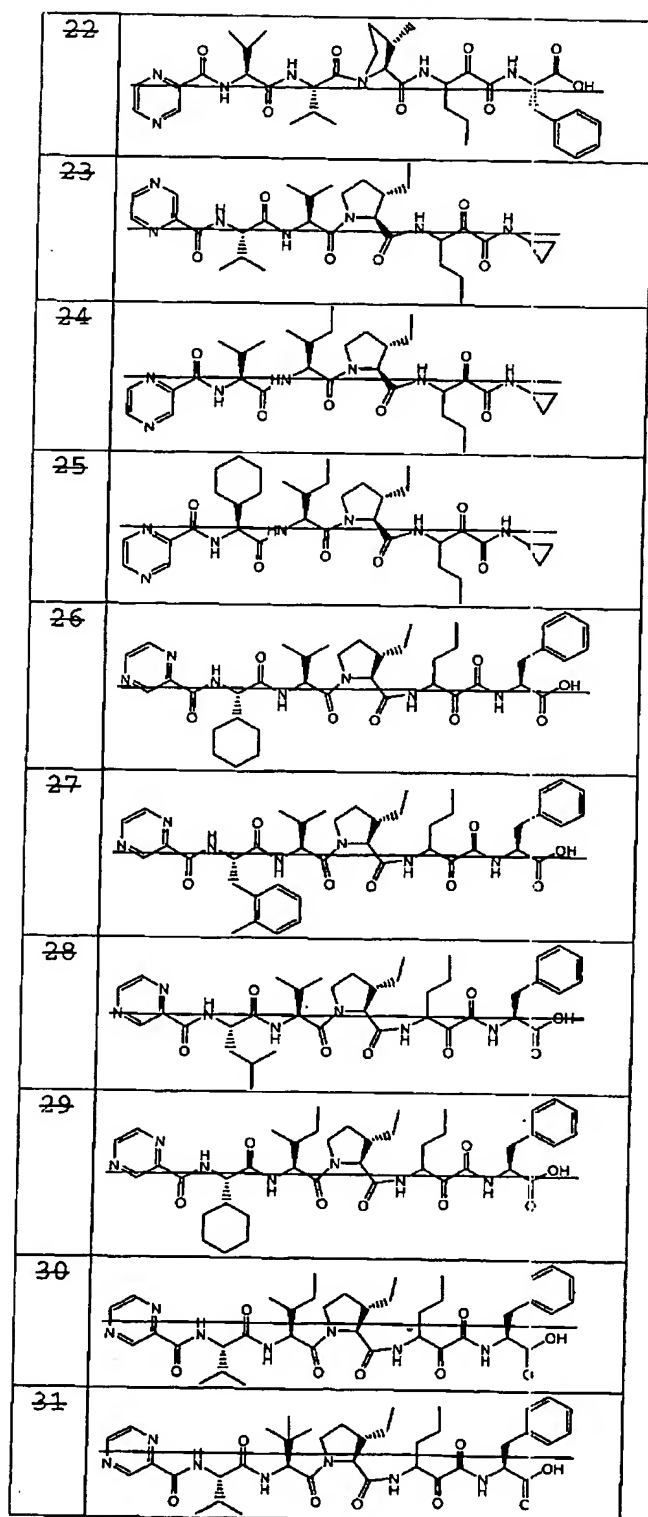
30-39 (cancelled)

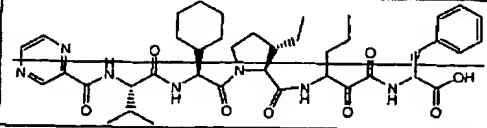
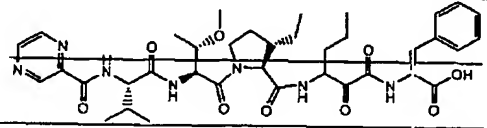
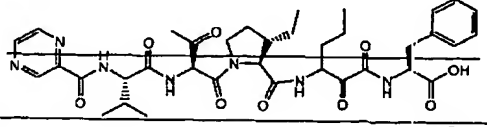
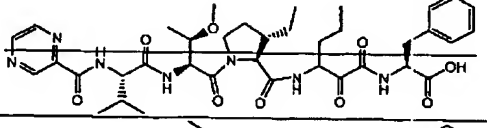
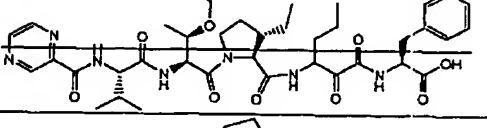
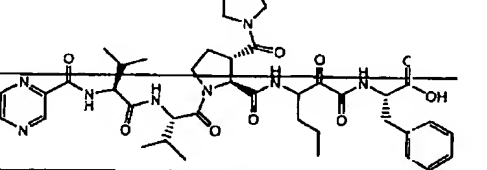
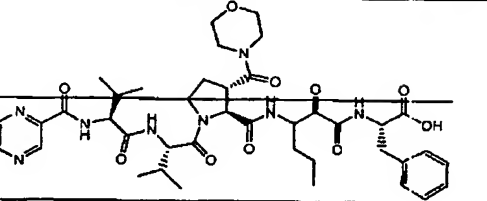
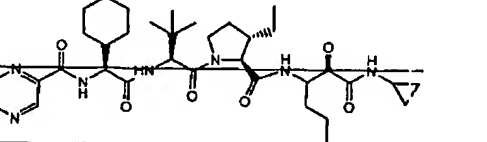
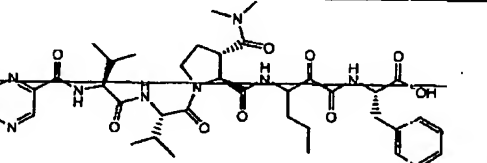
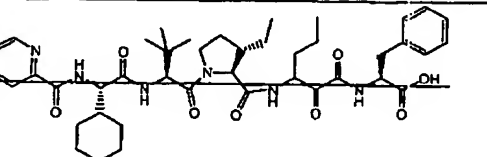
40. (currently amended) The compound according to claim 1, wherein the compound is:



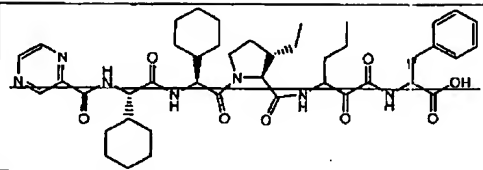
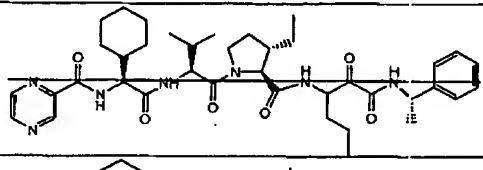
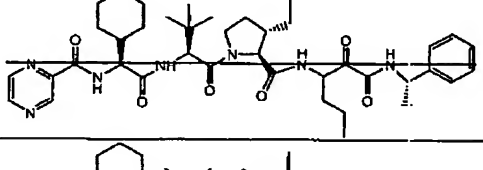
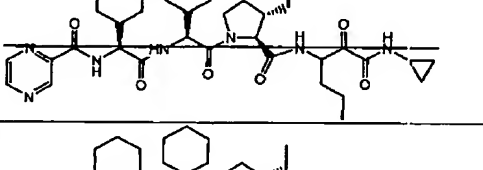
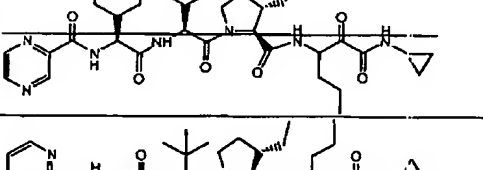
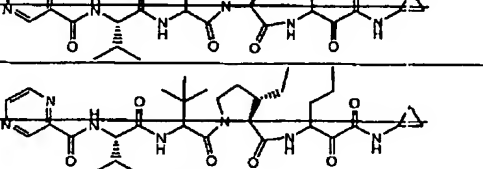
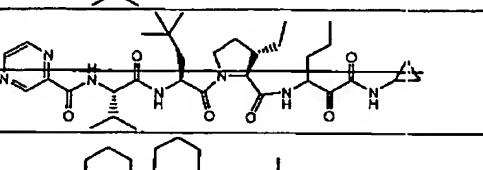
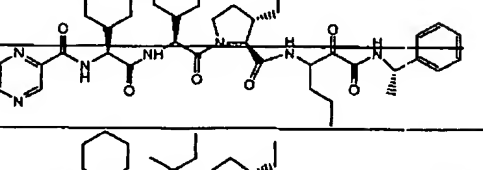
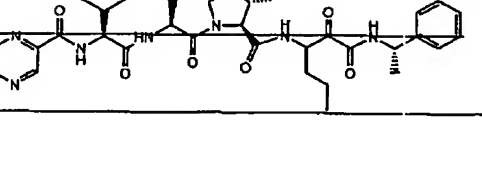



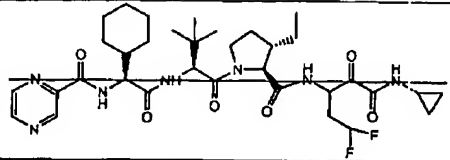
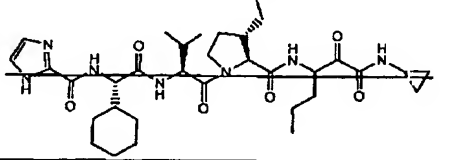
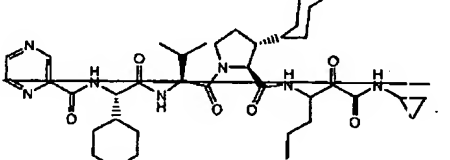
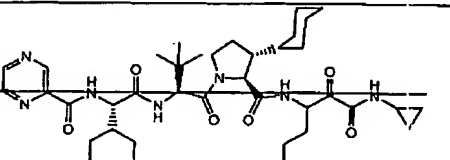
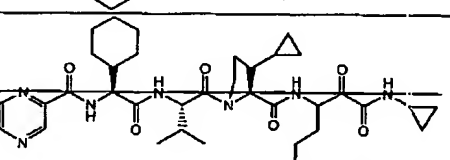
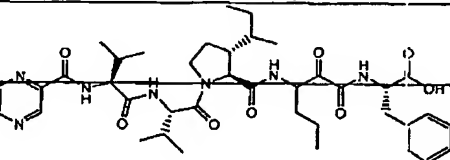
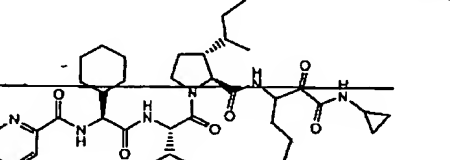
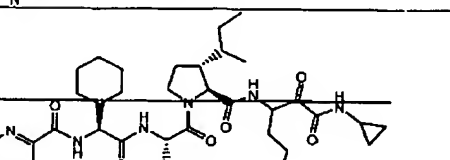
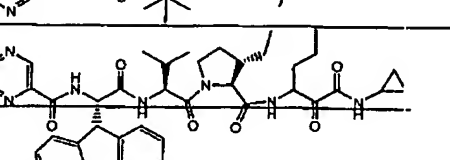


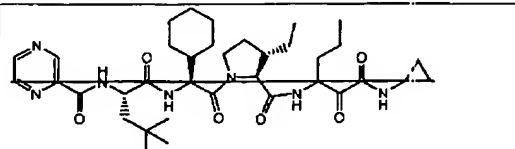
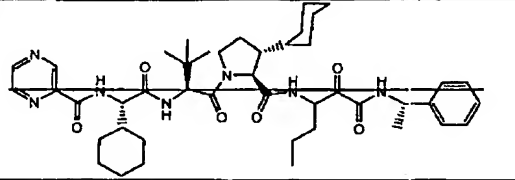
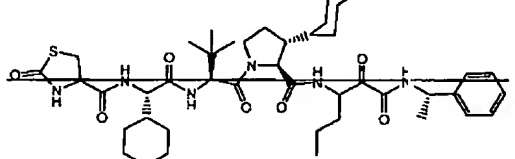
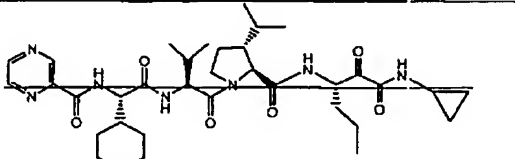
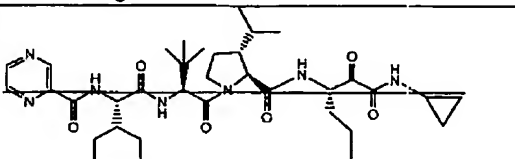
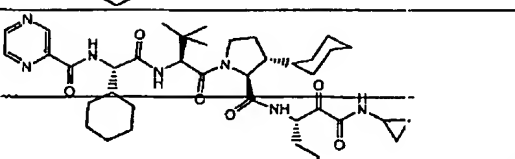
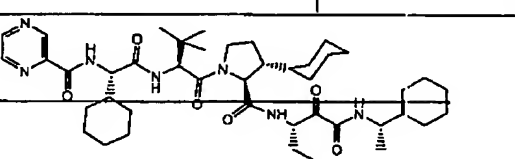
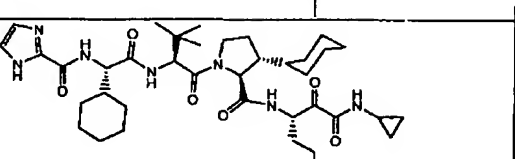
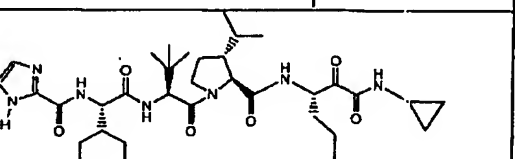


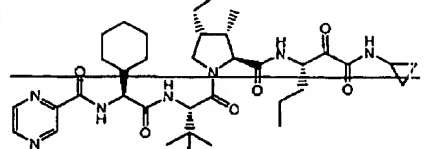
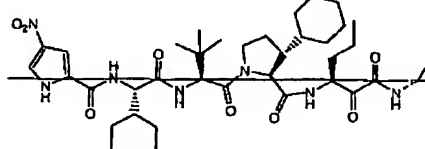
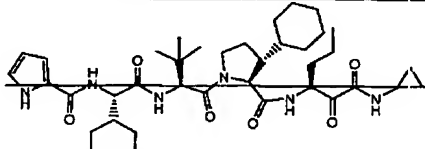
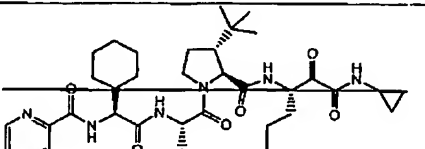
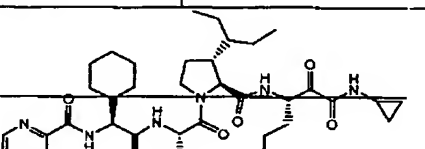
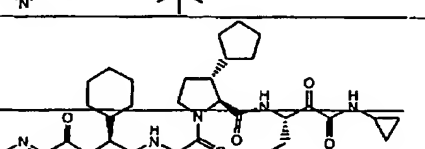
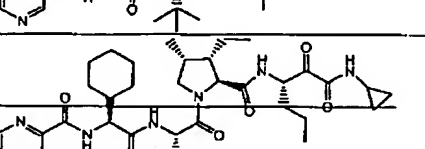
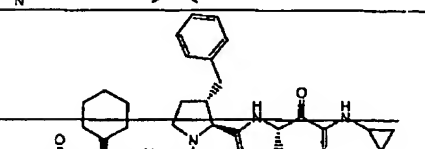
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41. (previously presented) A pharmaceutical composition comprising a compound according to claim 1 or a

pharmaceutically acceptable salt or mixtures thereof in an amount effective to inhibit a serine protease; and a acceptable carrier, adjuvant or vehicle.

42. (original) The composition according to claim 41, wherein said composition is formulated for administration to a patient.

43. (original) The composition according to claim 42, wherein said composition comprises an additional agent selected from an immunomodulatory agent; an antiviral agent; a second inhibitor of HCV protease; an inhibitor of another target in the HCV life cycle; and a cytochrome P-450 inhibitor; or combinations thereof.

44. (original) The composition according to claim 41, wherein said immunomodulatory agent is  $\alpha$ -,  $\beta$ -, or  $\gamma$ -interferon or thymosin; said antiviral agent is ribavirin, amantadine, or telbivudine; or said inhibitor of another target in the HCV life cycle is an inhibitor of HCV helicase, polymerase, or metalloprotease.

45. (original) The composition according to claim 43, wherein said cytochrome P-450 inhibitor is ritonavir.

46. (previously presented) A method of inhibiting the activity of a serine protease comprising the step of contacting said serine protease with a compound according to claims 1.

47. (original) The method according to claim 46, wherein said serine protease is an HCV NS3 protease.

48. (original) A method of treating an HCV infection in a patient comprising the step of administering to said patient a composition according to claim 42.

49. (original) The method according to claim 48, comprising the additional step of administering to said patient an additional agent selected from an immunomodulatory agent; an antiviral agent; a second inhibitor of HCV protease; an inhibitor of another target in the HCV life cycle; or combinations thereof; wherein said additional agent is administered to said patient as part of said composition according to claim 42 or as a separate dosage form.

50. (original) The method according to claim 49, wherein said immunomodulatory agent is  $\alpha$ -,  $\beta$ -, or  $\gamma$ -interferon or thymosin; said antiviral agent is ribavirin or amantadine; or said inhibitor of another target in the HCV life cycle is an inhibitor of HCV helicase, polymerase, or metalloprotease.

51. (previously presented) A method of eliminating or reducing HCV contamination of a biological sample or medical or laboratory equipment, comprising the step of contacting said biological sample or medical or laboratory equipment with a composition according to claim 41.

52. (previously presented) The method according to claim 51, wherein said sample or equipment is selected from blood, other body fluids, biological tissue, a surgical instrument, a surgical garment, a laboratory instrument, a laboratory garment, a blood or other body fluid collection apparatus; a blood or other body fluid storage material.

53. (previously presented) The method according to claim 52, wherein said body fluid is blood.